UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,781	10/05/2005	Gregorius Maria Hubertus Goyarts	GOY4	5611

6980 7590 12/10/2008

TROUTMAN SANDERS LLP
600 PEACHTREE STREET , NE
ATLANTA, GA 30308

EXAMINER	
KHATRI, PRASHANT J	
ART UNIT	PAPER NUMBER
1794	
MAIL DATE	DELIVERY MODE
12/10/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/551,781	GOYARTS, GREGORIUS MARIA HUBERTUS	
	Examiner	Art Unit	
	PRASHANT J. KHATRI	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

In response to Amendments/Arguments filed 8/15/2008. Claims 1-21 were amended.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Given that the present claims 1 and 8 require "at least one layer of textile material" which could include only one layer and also disclose interfacial region between "each pair of layers", it is not clear what pair of layers is being referred to.

4. Claim 11 recites the limitation "the molten moisture-curable plastic material" in the first line. There is insufficient antecedent basis for this limitation in the claim.

5. Claim 13 recites the limitation "the moisture-curable plastic material" in the first line. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-2, 8, and 19-20 rejected under 35 U.S.C. 102(b) as being anticipated by Levy (***US 5114418***).

8. Levy discloses a highly absorbent, leak-proof, breathable diaper. Prior art discloses a three-layer diaper that is comprised of at least one layer that is a fabric and reusable (***FIG. 1; col. 1, lines 33+***). Regarding the patterning of adhesive disclosed in claims 1-2 and 8, prior art discloses a urethane adhesive that is applied between the top layer (***element 10***) and intermediate layer (***element 12***) and intermediate layer and bottom layer (***element 14***). Further, it is noted that the adhesive material between the above layers is applied by using a cross-hatch, line-gravure, or dot-roller to insure the resulting laminations remain intact after machine washings (***col. 2, lines 25+***). Further, Examiner takes the position that the dot-roller would form a series of dots to form the adhesive pattern and forms the presently claimed interfacial region between the layers as shown in Figure 1. Regarding the finishing, it is noted that since the prior art discloses a laminate structure that is the same as that in claim 1, Examiner takes the position that the resultant laminate does not undergo any finishing steps. Further, as shown by prior art, the material is washed for testing purposes to determine durability after curing of the adhesive (***col. 2, lines 30+***).

9. Claims 1, 2, 4-6, 8-10, 13-14, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Tolbert et al. (***US 20010001300***).

Tolbert et al. disclose a method of constructing textile products using curable hot melt adhesives and products made thereof. Prior art discloses that the adhesive used is a

moisture curable hot melt polyurethane that reacts with moisture present in the atmosphere to become a thermoset adhesive (***para. 0016***). Prior art also states the adhesive material may be applied between the surfaces of two or more adjacent textile fabrics to form a seam securing the fabrics to each other (***para. 0015***). Concerning the dot pattern of the adhesive, prior art discloses that the pattern may be applied in a "discontinuous bead or pattern" and further for forming decorative patterns such as a quilted look across the surface of the fabric (***para. 0078-0079***). Given that prior art discloses an identical multilayer washable material to the presently claimed multilayer washable article comprising a moisture-curable polyurethane, therefore, the Examiner takes the position that the adhesive would inherently prevent wrinkling. Concerning the phrase "fully moisture-cured", Examiner takes the position that the phrase means degree of curing and as disclosed by prior art, the process is dependent on time span the textiles and adhesives are allowed to cure (***para. 0038***). Furthermore, prior art discloses that the full cure time for polyurethane adhesive is a period from 1 to 10 days (***para.0049***). Therefore, it is clear that the polyurethane adhesive is fully moisture cured as presently claimed. Prior art also discloses the adhesive material is applied at an initial melt temperature (***para. 0039***). Furthermore, it is noted that the adhesive material is solid at room temperature and once a softening point temperature is reached, a phase change occurs (i.e. solid to liquid phase change) (***para. 0038***). Examiner takes the position that the application of the adhesive material at a temperature above the softening point is equivalent to Applicant's claim that the adhesive material is applied at a temperature higher than the melting point. Concerning the adhesive application to the

border, prior art discloses the adhesive “can be applied between adjacent surfaces of two or more textile fabrics to construct a durable adhesive seam securing the textile fabrics to one another" (***para. 0015, middle of para.***). Given that the definition of "adjacent" as defined by Merriam-Webster is that the term means not distant or having a common endpoint or border, Examiner takes the position that the application of adhesive material to the edges of each surface on a multilayered material is equivalent to the Applicant’s claim of patterning a border as the adhesives on the edges will create a border. It is also noted that since this embodiment does not disclose any further finishing steps, the resultant article contains adherences for multiple layers, which would meet the present limitations in claim 1. Further, Examiner takes the position that placing a border on the edges would create better adhesion and prevent delamination of the material. Examiner takes the position that the application of adhesive material to the edges is equivalent to the Applicant’s claim of patterning a border as the adhesives on the edges will create a border.

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1-10, 13-15, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn et al. (***US 5306267***) in view of Levy (***US 5114418***) and Tolbert et al. (***US 20010001300***).

12. Hahn et al. disclose a reusable diaper (***FIGS. 3 and 4***) that is comprised of at least a front panel (***element 12***), middle panel (***element 14***), and back panel (***element 16***). Prior art discloses the front panel is a comprised of a polyester wicking fabric, cotton, polyester, nylon, and the like (***col. 5, lines 22+***). The middle panel is an absorbent layer comprised of viscose rayon (***col. 5, lines 44+***). The back panel is a liquid impermeable material such as nylon (***col. 7, lines 24+***). Further, prior art discloses the front and back panels may be joined together by adhesives (***col. 7, lines 57+***). Regarding claims 7 and 21, prior art discloses additional layers (***element 18***) may be disposed between the middle panel and the front panel that are cotton (***col. 6, lines 39+***). As disclosed by prior art, these layers are comprised of cotton, which is one of the least allergenic materials (***col. 6, lines 40+***). Examiner takes the position that this is equivalent to the presently claimed additional anti-allergy layer as cotton is a known material that is very anti-allergenic. However, prior art is silent to the use of adhesives in the interfacial areas, the use of moisture-curable plastic materials, and placing adhesive material on the edges of a surface to form a border pattern.

13. Levy discloses a highly absorbent, leak-proof, breathable diaper. Prior art discloses a three-layer diaper that is comprised of at least one layer that is a fabric and reusable (***FIG. 1; col. 1, lines 33+***). Regarding the patterning of adhesive disclosed in claims 1-2 and 8, prior art discloses a urethane adhesive that is applied between the top layer (***element 10***) and intermediate layer (***element 12***) and intermediate layer and bottom layer (***element 14***). Further, it is noted that the adhesive material between the above layers is applied by using a cross-hatch, line-gravure, or dot-roller to ensure the

resulting laminations remain intact after machine washings (***col. 2, lines 25+***). Further, Examiner takes the position that the dot-roller would form a series of dots to form the adhesive pattern and forms the presently claimed interfacial region between the layers as shown in Figure 1. Regarding the finishing, it is noted that since the prior art discloses a laminate structure that is the same as that in claim 1, Examiner takes the position that the resultant laminate does not undergo any finishing steps. Further, as shown by prior art, the material is washed for testing purposes to determine durability after curing of the adhesive (***col. 2, lines 30+***).

14. Tolbert et al. disclose a method of constructing textile products using curable hot melt adhesives and products made thereof. Prior art discloses that the adhesive used is a moisture curable hot melt polyurethane that reacts with moisture present in the atmosphere to become a thermoset adhesive (***para. 0016***). Prior art also states the adhesive material may be applied between the surfaces of two or more adjacent textile fabrics to form a seam securing the fabrics to each other (***para. 0015***). Concerning the phrase "fully moisture-cured", Examiner takes the position that the phrase means degree of curing and as disclosed by prior art, the process is dependent on time span the textiles and adhesives are allowed to cure (***para. 0038***). Furthermore, prior art discloses that the full cure time for polyurethane adhesive is a period from 1 to 10 days (***para.0049***). Therefore, it is clear that the polyurethane adhesive is fully moisture cured as presently claimed. Prior art also discloses the adhesive material is applied at an initial melt temperature (***para. 0039***). Furthermore, it is noted that the adhesive material is solid at room temperature and once a softening point temperature is reached, a

phase change occurs (i.e. solid to liquid phase change) (***para. 0038***). Examiner takes the position that the application of the adhesive material at a temperature above the softening point is equivalent to Applicant's claim that the adhesive material is applied at a temperature higher than the melting point. Prior art further discloses the curable hot melt adhesives are advantageous because they do not require a discrete or separate cure step and using said hot melt adhesives in the presence of various textiles such as cotton accelerate the curing process (***para. 0048***). Examiner therefore takes the position that the production process is sped up and considered to be cheaper as the curing step would increase time and decrease productivity of a production line. Concerning the adhesive application to the border, prior art discloses the adhesive "can be applied between adjacent surfaces of two or more textile fabrics to construct a durable adhesive seam securing the textile fabrics to one another" (***para. 0015, middle of para.***). Given that the definition of "adjacent" as defined by Merriam-Webster is that the term means not distant or having a common endpoint or border, Examiner takes the position that the application of adhesive material to the edges of each surface on a multilayered material is equivalent to the Applicant's claim of patterning a border as the adhesives on the edges will create a border. It is also noted that since this embodiment does not disclose any further finishing steps, the resultant article contains adherences for multiple layers, which would meet the present limitations in claim 1. Further, Examiner takes the position that placing a border on the edges would create better adhesion and prevent delamination of the material.

15. However, note that while Levy and Tolbert et al. do not disclose all the features of the present claimed invention, Levy and Tolbert et al. are used as teaching references, and therefore, it is not necessary for these secondary references to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather these references teach certain concepts, namely, patterning of adhesive materials in the interfacial regions and the use of hot melt moisture curable adhesives in order to ensure the resulting laminations remain intact after machine washings and that the production process is sped up and considered to be cheaper as the curing step would increase time and decrease productivity of a production line and in combination with the primary reference, discloses the presently claimed invention.

16. All of the elements were known within the art. The only difference is a single disclosure containing all of the presently claimed elements. Hahn et al. disclose a reusable diaper (***FIGS. 3 and 4***) that is comprised of at least a front panel (***element 12***), middle panel (***element 14***), and back panel (***element 16***). However, prior art is silent to the use of adhesives in the interfacial areas, the use of moisture-curable plastic materials, and placing adhesive material on the edges of a surface to form a border pattern. Levy discloses a three-layer laminate that is a highly absorbent, leak-proof, breathable diaper comprising a patterned adhesive material disposed in the interfacial regions between the layers. Tolbert et al. disclose a method of constructing textile products using curable hot melt adhesives and products made thereof. The motivation to combine the above references is drawn towards the patterning the adhesive material

between the each layer a three-layer laminate applied by using a cross-hatch, line-gravure, or dot-roller to insure the resulting laminations remain intact after machine washings. The use of a hot melt moisture-curable adhesive discloses the curable hot melt adhesives are advantageous because they do not require a discrete or separate cure step and using said hot melt adhesives in the presence of various textiles such as cotton accelerate the curing process. Further, in providing adhesives on the edges allows for the formation of "durable adhesive seam[s] securing the textile fabrics to one another". The resultant article is a durable material that can withstand multiple washings with interfacial adhesive patterning in three-layer systems and also providing for a fast and cheap way to produce materials containing adhesives as shown by Tolbert. Therefore, it would have been obvious to one of ordinary skill in the art to apply a patterned hot melt moisture curable adhesive in the interfacial regions of the laminate disclosed by Hahn et al.

17. Claims 11-12 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn et al. (***US 5306267***) in view of Levy (***US 5114418***) and Tolbert et al. (***US 20010001300***) as applied to claims 8-10 and 15 above, and further in view of McIntyre (***US 4911948***).

18. Prior art discloses the above in paragraphs 10-15. However, prior art is silent to the use of screen printing.

19. McIntyre discloses a method of screen printing of hot melt adhesives onto moving web substrates such as diapers and the like (***col. 2, lines 19+***). The screen

printing apparatus is comprised of a slot nozzle within a screen cylinder sleeve (***col. 3, lines 37+***). Furthermore, it is noted that the hot melt adhesive material can be a polyurethane moisture cure type (***col. 6, lines 14+***). Regarding the heated stencil, prior art discloses the screen cylinder sleeve is heated to prevent solidification of the adhesive material (***col. 2, lines 39+***). Examiner takes the position that the screen cylinder has pores to allow dispersion of the adhesive material as the stencil as the adhesive material is distributed through the pores, which is the primary purpose of the stencil. Given that the screen cylinder is heated to prevent the clogging of the pores, the temperature would inherently be at a temperature above the melting point as if the temperature would be below, the pores of the screen cylinder would be clogged. Concerning the seamless nature of the cylinder, as shown by prior art in Figure 3, there is no seam on the cylinder. The process and apparatus as shown allows for improved speed and viscosity regulation by heating (***cols. 1 and 2***). Regarding the cutting of individual articles made from the continuous process, prior art discloses a die cutting process may be added after the screen printing process (***col. 2, lines 8+***). Examiner takes the position that the use of a cutting process after lamination to produce individual articles is an obvious addition to the manufacturing process as it would allow for easier packaging of goods for sale.

20. However, note that while McIntyre does not disclose all the features of the present claimed invention, McIntyre is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re*

Keller 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, screen printing of adhesive material using a roller stencil in order to increase production of articles containing adhesives on web material and in combination with the primary reference, discloses the presently claimed invention.

21. All of the elements were known within the art individually. The only difference was a single disclosure containing all of the presently claimed elements. Prior art discloses the above in paragraphs 6-10. However, prior art is silent to the screen printing process. McIntyre discloses a rotary screen printing process onto web substrates using a hot melt adhesive. Although McIntyre only discloses the screen printing process onto one layer of material, it would be obvious to one with ordinary skill in the art to use a second screen printing section to coat a second layer of material. The motivation to combine the above references is drawn towards the increase in production and uniformity of the adhesive layer as shown by McIntyre (***col. 2, lines 25+***). Therefore, it would have been obvious to one of ordinary skill in the art to apply the adhesive material in the resultant laminate shown above.

Response to Arguments

22. Applicant's arguments, see p. 6 (112 rejection), filed 8/15/2008, with respect to claims 1-21 have been fully considered and are persuasive. The previous rejection of the above claims has been withdrawn.

23. Applicant's arguments, see p. 6 (102 of Tolbert), filed 8/15/2008, with respect to claims 1-2, 4-6, 8-10, 13-14, and 18-20 have been fully considered and are persuasive. The rejection of the above claims has been withdrawn. However, under further reconsideration, Examiner determined that the reference was still valid as a secondary reference. While the present specification discloses that wrinkles "may" occur in Tolbert, there is no evidence to support the position that wrinkles actually do occur. Further, it is noted that the alternative embodiment as shown above in paragraph 8 regarding the definition of adjacent and the like for the edges on two different surfaces of the two different textiles, the reference is still valid.

24. Applicant's arguments, see p. 8-10 regarding the Ternstrom reference, filed 8/15/2008, with respect to claims 1-2, 8, and further a 103 rejection of claims 1-6 and 8-20 have been fully considered and are persuasive. The rejection of the above claims has been withdrawn.

25. Applicant's arguments filed 8/15/2008 regarding the McIntyre have been fully considered but they are not persuasive. While McIntyre does not explicitly state using washable materials, the phrase "web material" in the textile art includes all cellulosic fibrous material, some of which is washable. Further, McIntyre is a secondary reference teaching screen printing of adhesive material onto web materials. One of ordinary skill in the art would have known to modify the rolls to the desired adhesive pattern.

26. Applicant's arguments, see p. 10-12 (Kuehn et al. reference), filed 8/15/2008, with respect to claims 7 and 21 have been fully considered and are persuasive. The rejection of the above claims has been withdrawn.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smolik et al. (***US 5662991***) discloses a laminated fabric produced from a similar method presently claimed; However, prior art is silent to a third fabric layer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRASHANT J. KHATRI whose telephone number is (571)270-3470. The examiner can normally be reached on M-F 8:00 A.M.-5:00 P.M. (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PRASHANT J KHATRI
Examiner
Art Unit 1794

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794